

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022724**Date Inspected:** 19-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Report Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girders**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

- A). "A" Deck Longitudinal Stiffeners
- B). Lifting Lug Holes
- C). QA Verification

The QA Inspector observed the onsite inspection performed by the contractor's QC Inspection personnel. The inspection was performed on various field fit-up of weld joints and the Complete Joint Penetration (CJP) groove welds of the East Orthotropic Box Girders (OBG's). The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specifications (WPS's).

A). "A" Deck Longitudinal Stiffeners

The QAI observed the repair welding of the longitudinal stiffener identified as WN: 7W-8W-A-LS5, R1. The welding was performed by James Zhen ID-6001 utilizing the WPS identified as ABF-WPS-D15-1001 Repair, Rev. 0. The welding parameters were verified by the QC inspector Gary Ehram and appeared to comply with the contract specifications. The repair welding was not completed during this shift.

B). Lifting Lug Holes

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The QAI observed the CJP welding of the lifting lug holes identified as WN: 7W-PP56-W3-W4 and 7E-PP55-E3-W4. The welding was performed by Darcel Jackson ID and Jason Collins utilizing the WPS identified as ABF-WPS-D15-1050A-CU, Rev.0. The field inspection performed by Gary Ehram and Fred Von Hoff appeared to comply with the contract specifications. The CJP welding was not completed during this shift.

C). QA Verification

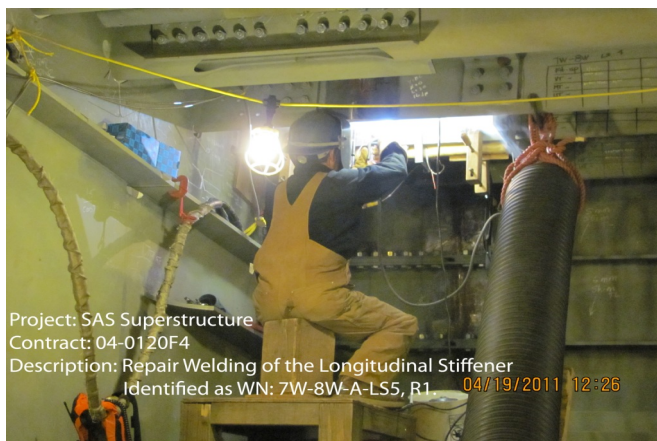
Later in the shift the QAI performed a random ultrasonic and magnetic particle verification test of the following Complete Joint Penetration (CJP) groove welds identified as WN: 6E-PP37.5-E5-LSE, LSW and TS. A total area of approximately 10% was tested to verify the weld and testing by QC meet the requirements of the contract documents. Test reports identified as , TL 6027 and TL-6028 were generated on this date.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the vertical (3G) and flat (1G) positions utilizing the E7018-H4R and E9018-H4R low hydrogen electrodes. The 3.2 mm and 4.0 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The WPS's were also utilized by the QC inspector's, Gary Ehram and Fred Von Hoff as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs below illustrate some of the work observed during this scheduled shift.



Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of American Bridge/Fluor welding, inspection and N.D.E. testing personnel scheduled for this shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
